

G4G

The National Genebank Perspective

*Theo van Hintum,
Centre for Genetic Resources, The Netherlands (CGN)*



G4G - The National Genebank Perspective

- genebanks for genomics
 - most presentations during this meeting: genomic analysis applied to genebank collections
 - which hypothesis ?
 - what technology ?
 - what material ?
 - how to manage the data ?
 - what analytical tools ?
 - makes sense for genebanks if the aim is building a resource (eScience)
 - technology develops too quickly
 - otherwise: genebanks should get out of it what they can
 - outputs often only show what we already know

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- genomics for genebanks
 - genomics could help genebanks do their tasks more effectively
 - sample the genepools
 - determine structure of diversity
 - compare structure of diversity to structure of collection
 - conserve the material
 - duplication / redundancy
 - improvement quality passport data
 - monitoring for quality control
 - support users by optimising search strategies
 - core collections / FIGS
 - elite collections / screening pannels
 - allele mining

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- what is needed to make genomics work for genebanks ?
 - genebank: questions & challenges
 - conceptual framework
 - what is it that genebanks want to improve ?
 - appropriate material (SSD lines / research sets)
 - appropriately identified
 - genomics: data
 - technology appropriate to application
 - data management
 - bioinformatics & biometrics: analytical tools
 - algorithms
 - visualisation

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■ national genebanks

- tremendous capacity but varying quality
- genomics generally doesn't have high priority
 - 'we're too busy keeping our material alive'
- generally others do the genomics
 - at best genebanks collaborate with research groups
- challenge: make genebanks benefit from genomics

depending on the application

- coordination & methodology
- capacity building (for planning and interpretation)
- software tools (to use genomics data for genebank purposes
-> DivSeek?)

Thank you for your attention !



WAGENINGENUR
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